

Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

**Formosa Plastics Corporation
 Baton Rouge Facility
 Polyvinyl Chloride (PVC) Unit
 Baton Rouge, East Baton Rouge Parish, Louisiana
 Agency Interest Number: 288
 Activity Number: PER20060005
 Draft Permit #1004-V1**

I. APPLICANT

Company:

Formosa Plastics Corp Louisiana
 Baton Rouge, Louisiana 70821-0271

Facility:

Baton Rouge Plant

PVC Unit

Gulf States Road, Baton Rouge, East Baton Rouge Parish, Louisiana

Approximate UTM coordinates are 673.829 kilometers East and 3375.528 kilometers North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS:

Formosa Plastics Corp LA, (FPC-LA), is an existing synthetic organic chemical manufacturing industry (SOCMI) facility consisting of a Vinyl Chloride Monomer (VCM) Unit, a Polyvinyl Chloride (PVC) Unit, and a Utility Unit. The Baton Rouge site has been in operation over 40 years. The following table lists all of the units at FPC-LA and their permitted status:

Unit	Permit No.	Date Issued	Permitting Status
CCN Unit & VCM 1 Unit	0840-00002-10	3/7/1997	Unit permanently shutdown: Sources will not be included in Title V permitting action
PVC Unit	1004-V0	10/24/ 2001	Title V issued
PVC Unit	1004-V1	Pending	Title V Renewal Permit Pending
VCM Unit	0840-00002-V0	08/11/2006	Title V Issued, amended 08/09/2007
Utilities Unit	2915-V0	09/12/2006	Title V Issued, amended 10/11/2006
Utilities Unit	2915-V1	Pending	Title V Modification Permit Pending

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Formosa Plastics Corporation owns and operates the Baton Rouge Plant. The FPC Baton Rouge Facility consists of several units that generate power, steam, N_2/O_2 , VCM, and PVC. This permit is for the PVC Unit. The plant currently produces more than six grades of suspension PVC and is able to manufacture up to three grades simultaneously.

The PVC Unit produces PVC using suspension polymerization. Polymerization occurs in batch reactors to convert the VCM charged in each batch to PVC in a water slurry. The unreacted VCM gas is recovered from the reactors for recycle. The PVC slurry is pumped to blowdown tanks, where additional unreacted VCM flashes overhead to be reclaimed by condensation. The blowdown tanks also serve as holding tanks for continuous feed of the slurry stripping columns.

Residual VCM is steam stripped from the PVC slurry in slurry stripping columns. Residual VCM is recovered from the equipment upstream of and including the slurry stripper. Condensed VCM is recycled to the process. Noncondensable gases are routed to the VCM Unit Incinerators (EIQ #231A, 231B, 231C in VCM Unit Title V Permit No. 0840-0002-V0).

The stripped PVC slurry is then pumped through heat exchangers to dryer feed holding tanks and centrifuges, where the slurry is dewatered and the PVC wet cake is produced. Water is pumped to the biotreatment plant (EIQ# 234 in VCM Unit Permit). PVC wet cake is dried in either cyclone or fluidized bed dryers. Air vented from the cyclone dryers is passed through a water scrubber and PVC resin is screened by sieves and pneumatically conveyed to storage silos for loading operations. Each silo vent is controlled with a bag or cartridge filter dust collector. Rail cars and trucks are used to deliver finished products to customers from the facility. Fugitive emissions from piping components and transfer equipment in the PVC Unit are included as part of the process.

In-process water from the PVC Unit is transported to a storage tank and is then steam stripped in the wastewater stripping columns. The stripped water is sent to the biotreatment plant to treat any remaining organic compounds. The emissions associated with wastewater from the PVC Unit are incorporated into Facility-wide Wastewater Emissions (Source ID 234), which is included in the VCM Unit permit application. The PVC Unit also maintains necessary utilities equipment to aid in process operations, such as cooling towers.

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III. PROPOSED PERMIT/PROJECT INFORMATION:

A. Proposed Permit

On November 15, 2003, Formosa Plastics Corporation submitted an application to revise and modify the existing Part 70 permit. A permit application and Emission Inventory Questionnaire was subsequently submitted by Formosa Plastics on December 2, 2004, completely replacing the November 2003 application for the revised and modified operating permit. On April 19, 2006, Formosa Plastics submitted a renewal application, which incorporates and replaces all previous application submittals. Supplemental information was received on May 30, 2007.

B. Project Description

This is a renewal of Title V Permit Number 1004-V0. Additionally, Formosa proposes the following modifications:

- 1) The PVC Unit modernization project includes modification of the existing reactors and ancillary equipment and construction and installation of two reactors, a slurry stripping column, a dryer, two chillers, and ancillary equipment. The project also includes replacement of the existing PT-103 tank (Source ID T-103) with a larger tank, addition of several insignificant activity tanks, and equipment associated with an automatic catalyst charging system. As a result of the modernization, there will be an increase in the PTE emissions from several existing emission sources in the PVC Unit such as the QA lab (EIQ# 216), reactor opening emissions (EIQ# 179), and material handling fugitive emissions (EIQ# 258). There will also be a small increase in PTE emissions from the PVC Unit vent stream to the Incinerators (EIQ# 231A, 231B, 231C); this increase has been approved in the recent VCM Unit Title V Permit No. 0840-00002-V0.
- 2) Inclusion of modifications to the internal configuration of existing reactors and ancillary equipment to improve heat transfer during the exothermic polymerization reaction. As a result of the change, batch cycle time of the reactor is decreased.
- 3) Reconciliation of Methanol Emissions – In the November 2003 and December 2004 applications, FPC requested removal of methanol emissions from the PVC Dryers (EIQ# 178A-F, 213) since methanol had been eliminated from the process. Although methanol is not used in the process in the manner previously documented, it has since been determined that there is a potential for a small percentage of methanol to be present in a reactor additive. The methanol emissions are accounted for in the PVC Unit Process Train (EIQ# 257).

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- 4) Reconciliation of VOC emissions to include previously existing but unquantified mineral spirits used with a catalyst in the PVC polymerization reaction; these emissions are accounted for in the PVC Unit Process Train (EIQ #257).
- 5) Deletion of the four proposed (never constructed) silos (Source ID 214, 226, 227, and 228) previously approved in earlier permitting activities.
- 6) Reconciliation of the emission calculations for existing sources to incorporate the most current calculation methodology, factors, and speciation.
- 7) Updates to the language in the regulatory applicability tables,
- 8) Updates to the Insignificant Activities (LAC 33:III.501.B.5.A),
- 9) Incorporation of General Condition XVII (GC XVII) Activities.
- 10) FPC requests the removal of the annual stack testing requirement from the permit. Permit 1004-V0 Specific Condition No. 3 requires annual stack testing for particulate matter (PM₁₀) from the PVC Dryers (EIQ# 178A-F, 213), Loading and/or Storage Silos (EIQ#180-198). Previous stack test data demonstrates that emissions from the PVC Dryers, Loading and Storage Silos are within the permit limits. PVC Dryer emissions are controlled by cyclones (multicyclones) and a wet scrubber. Loading and Storage Silos are controlled by baghouses. The PVC Dryers are also operated in accordance with Specific Condition No. 8 of Permit Number 1004-V0. Note: The stack testing condition(s) was deleted in this permitting action.
- 11) FPC proposes that in addition to monitoring PVC resin in accordance with 40 CFR 61 Subpart F, FPC will monitor/record the hours of operation of the dryers (EIQ# 178A-F, 206, 213 and 256) and will use the hours of operation to calculate PM₁₀ emissions.
- 12) FPC requests clarification of the Part 70 Permit No. 1004-V0 Specific Condition No. 8 concerning the continuous flow monitoring and recordkeeping requirements. FPC proposes to incorporate the definition of continuous as defined in 40 CFR 63 Subpart H. This language has been incorporated as a federal enforceable monitoring condition for the scrubber(s) flow rate on the dryers as LAC 33:III.507.H requirement.
- 13) Reconciliation of particulate emissions from the cooling towers (EIQ# 224) due to use of the correct drift rate in the PM₁₀ calculations.
- 14) Reconciliation of Material Handling Emissions (EIQ# 258)- The emissions calculations were updated to incorporate previously existing, unquantified fugitive particulate emissions created during the production process and product loading. In addition, there will be an increase in material handling emissions from the PVC modernization project from material handling during production processing and product loading.
- 15) Creation of a Process Group as the PVC Unit Process Train (EIQ# 257) to incorporate sources downstream of the PVC Unit Slurry Stripping columns for

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operational flexibility. The PVC Unit Process Train includes all sources emitting PM and VOC downstream of the PVC Unit Slurry Stripping Columns, excluding fugitive VOC emissions already included in EIQ#177. Several of the sources included in the PVC Unit Process Train were previously permitted as individual emission sources, such as the PVC Dryers (EIQ# 178A-F, 206, 213, and 256), Storage Silos (EIQ# 193-198), Loading Silos (EIQ# 180-192), Centrifuges and Slurry Tanks. By permitting these sources together as the PVC Unit Process Train, FPC is able to more accurately reflect potential emissions during operation.

- 16) Incorporation of a PVC Unit Emissions CAP as the PVC CAP. The PVC Unit Emissions CAP includes the PVC Unit Process Train (EIQ#257), Reactor Opening Emissions (EIQ#179), PVC Unit Fugitive Emissions (EIQ#177), QA Lab Vents (EIQ#216), and Cooling Towers (EIQ #224). The total average pound per hour and annual ton per year PM and VOC emissions for these sources are permitted in the PVC CAP (Group11). Maximum pound per hour emissions are permitted with each individual source. Additionally, FPC proposed monitoring and recordkeeping requirements to comply with federal enforceable conditions of 40 CFR 61 Subpart F and/or LAC 33:III.507.H and streamlined requirements to comply with LA-Non HON MACT to meet LAC 33:III.5109.A requirements.
- 17) FPC requests continued allowance for addition or removal of fugitive emission components as part of the LDAR program for fugitive VOC emissions (EIQ# 177).
- 18) Inclusion of VOC netting demonstration and emission credit for emission offsets per NNSR.
- 19) Inclusion of PSD requirements for PM₁₀ from PSD-LA-546 (M-2).
- 20) FPC proposes to remove the monitoring requirements of 40 CFR 63.104 for the PVC Unit Cooling Tower (Source ID 224) from the FPC Air Toxics Compliance Plan (ATCP). The ATCP was approved by the LDEQ on May 15, 1995. As detailed in the ATCP Section IV.5, FPC proposed monitoring facility cooling towers, including the PVC Unit cooling tower, in accordance with the HON provisions of 40 CFR 63.104, Heat Exchange System Requirements. However, the PVC Unit is not a HON regulated unit. Therefore the monitoring requirements of 40 CFR 63.104 do not apply to the cooling tower located in this unit. The costs associated with collection, transportation, and analyses of the PVC Unit cooling tower water for analytical testing are a competitive disadvantage to the facility. Additionally, sampling results from year 2000 to present have confirmed HAP VOC concentrations near or below the detection limit of 1 part per billion (ppb) for all monitored HAPs. This condition was deleted.

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- 21) Reconciliation of unquantified emissions from two previously existing PVC Slurry Tanks, T-508 (vinyl chloride emissions) and T-510 (vinyl chloride, ammonia and chlorine emissions). These tanks are included in the PVC Unit Process train (EIQ# 257).
- 22) Deletion of Slurry Tank T-225H. Permit No. 1004-V0 included approval to construct a new PVC Slurry Tank (EIQ# T-225H). This tank will not be constructed.

Estimated emissions in tons per year for the PVC Plant are as follows:

Pollutant	Before	After	Change
PM ₁₀	118.19	132.03	+13.84
SO ₂	-	-	-
NO _x	-	-	-
CO	-	-	-
VOC *	121.36	72.77	-48.59

***VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):**

Pollutant	Before	After	Change
Vinyl Chloride Monomer	22.29	31.28	+8.99
Chloroform	-	0.73	+0.73
1,2-Dichloroethane (EDC)	-	0.33	+0.33
Methanol	97.79	31.06	-66.73
Total	120.08	63.40	-56.68

Non-VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

Pollutant	Before	After	Change
Ammonia	-	<0.001	<0.001
Chlorine	<0.001	4.40	+4.40
Total	<0.001	4.40	+4.40

***Other VOC (TPY):** 9.37

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C. Regulatory Analysis

This application was reviewed for compliance with the Louisiana Part 70 operating permit program, Louisiana Air Quality Regulations, Louisiana Comprehensive TAP Emission Control Program, NSPS, NESHAP, CAM and PSD/NNSR regulations.

1. Louisiana Air Quality Regulations and NSPS

The applicability of the appropriate regulations is straightforward and provided in the Facility Specific Requirements Section of the draft permit, or where provided, in Tables 1 and 2 of the draft permit. Similarly, the Monitoring, Reporting, and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions, and standards are provided in the Facility Specific Requirements Section of the Part 70 permit.

Limitations on overall plant PVC production (reactor and dryer throughput) are specified. These limitations and operating requirements can be found in the Facility Specific Requirements Section of the Part 70 permit.

New Source Performance Standards (NSPS) apply to the facility but do not apply to the PVC Unit.

2. Compliance Assurance Monitoring (CAM)

40 CFR 64-Compliance Assurance Monitoring (CAM) does not apply to the PSEUs in the PVC Unit because the PSEUs are subject to a NESHAP regulation published after November 15, 1990 or the particulate filter devices are recovery devices that meet the definition of "inherent process equipment".

3. PSD/NNSR

Due to the close timing of construction of the PVC Unit modernization project with the Utilities Unit project (approved in Title V Permit No. 2915-V0) and the Vinyl Chloride Monomer (VCM) Unit modification project (approved in Title V Permit No. 0840-00002-V0), the New Source Review (NSR) analyses was updated in May 2007, to include all three projects. The proposed modifications were reviewed in accordance with NSR requirements. The net emissions increases of sulfur dioxide (SO₂) and carbon monoxide (CO) will be below the PSD threshold, therefore, no further PSD review is

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required for these pollutants. Nitrogen oxides (NO_x) emissions from the proposed PVC Unit modernization project will be below the respective Nonattainment New Source Review (NNSR)/PSD thresholds; therefore, no further PSD review is required for NO_x. NNSR/PSD review was required for VOC and PM₁₀ emissions as demonstrated in the table below:

<u>Pollutant</u>	<u>Baseline Actual Emissions</u>	<u>Projected Actual Emissions (PTE)</u>	<u>Contemporaneous Changes</u>	<u>Net Emissions Increase</u>	<u>PSD de minimis</u>	<u>Review required?</u>
PM	58.86	86.08	9.29	36.53	25	Y
PM ₁₀	54.81	81.60	9.29	36.09	15	Y
SO ₂	0.06	0.57	-	0.51	40	N
NO _x	25.51	59.23	37.78	-4.06	40	N
CO	0.59	34.44	-	33.85	100	N
VOC	26.05	88.96	4.04	66.95	40 ¹	(NNSR) Y

¹Per LAC 33:III.509.1.3, PSD requirements do not apply to nonattainment pollutants; Nonattainment New Source Review (NNSR) is applicable.

a. Nonattainment New Source Review (NNSR)

NSR review indicates that the net emissions increases of volatile organic compounds (VOC) will be above the NNSR threshold. FPC-LA used banked credits to 'net out' of NNSR LAER review. VOC emission credits for emissions offsetting was required to "net out" and include VOC emission offsets achieved from removal of methanol in the PVC dryers due to a change in the method of operation in 2002, elimination of the marine/tank car loading project in 1995 with 3.07 credits remaining, and shutdown of VCM1 Unit in 2005. Full details on the sources included in the VOC NNSR netting demonstration are as provided in the May 30, 2007 update to the PVC Unit permit application.

b. Prevention of Significant Deterioration (PSD)

The net increase in PM/PM₁₀ emissions for the PVC Unit modernization project is greater than the PSD significance threshold for PM/PM₁₀ and required a PSD Determination. The PSD analyses includes a Best Available Control technology (BACT) analysis, an air quality analysis, and additional impacts analysis. Full details of the PSD Review are

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provided in PSD-LA-546 (M-2), and where specified, as incorporated in the Part 70 permit.

4. Maximum Achievable Control Technology (MACT) Requirements

The PVC MACT was promulgated on July 10, 2002. The MACT requires existing sources to comply with the requirements of NESHAP 40 CFR 61 Subparts F and V. (Note: The U.S Court of Appeals vacated the PVC MACT on June 18, 2004, and remanded it to the EPA for further work. No PVC MACT requirements from Subpart J have been included in this permit). The PVC unit is in compliance with the requirements of NESHAP 40 CFR 61 Subparts F and V.

5. Louisiana Comprehensive TAP Emission Control Program

This facility is a major source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51. Maximum Achievable Control Technology is required for pollutants that exceed the minimum emission rate (MER) in Table 51.1 and 2. MACT determination for an affected source(s) is included as a specific requirement in the Part 70 permit.

6. Air Modeling Analysis

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Air Quality Standard (NAAQS)
PM ₁₀	Annual	45.40 ug/m3	50 ug/m3
	24	136.1 ug/m3	150 ug/m3
Vinyl Chloride**	Annual	8.66 ug/m3	1.19 ug/m3

**The modeling shows an exceedance of vinyl chloride outside the boundaries of FPC-LA; the exceedance occurs only on other industrial property and does not impact non-industrial property.

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7. General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General condition XVII Activities are not subject to testing, monitoring, reporting, or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the table below and to Section VIII of the Part 70 permit.

Work Activity	Schedule***	Emission Rates - tons				VOC
		PM ₁₀	SO ₂	NO _x	CO	
TLV Calibration	Daily for three minutes					<0.001
GC Calibration	Three /day for 16 minutes each					<0.001
Equipment Preparation for operation and maintenance	Varies two/day-monthly					0.005
Sampling Activities	Varies four/day-annually					0.01
Turnaround Emissions from opening and cleaning equipment	Once/year					0.07
Propylene Glycol Activities						0.07
Filter Maintenance	Varies from daily to six/year					0.01
Vessel Openings and Maintenance	Once/year per vessel					0.11
Total						0.175

***Schedule: The scheduled frequencies are estimates only and may fluctuate.

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8. Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the table below and to Section IX of the Part 70 permit.

Equipment #	Description	Tank Volume (gal)	Insignificant Activity Category	Pollutant	Annual Emissions (tpy)
PV-101	Storage Tank PV-101	264	LAC 33:III.501.B.5.A.3	Total VOC	0.001
PT-104	Storage Tank PT-104	4,756	LAC 33:III.501.B.5.A.3	Total VOC Methanol	0.04 0.02
PT-107	Dissolving Tank PT-107	6,340	LAC 33:III.501.B.5.A.3	Total VOC	<0.001
PT-108	Storage Tank PT-108	2,536	LAC 33:III.501.B.5.A.3	Total VOC	<0.001
PT-109	Dissolving Tank PT-109	3,170	LAC 33:III.501.B.5.A.3	Total VOC Methanol	0.02 0.01
PT-110	Storage Tank PT-110	952	LAC 33:III.501.B.5.A.3	Total VOC Methanol	<0.001 <0.001
PT-113	Dissolving Tank PT-113	1,050	LAC 33:III.501.B.5.A.3	Total VOC	<0.001
PT-114	Storage Tank PT-114	317	LAC 33:III.501.B.5.A.3	Total VOC	<0.001
PT-115	Dissolving Tank PT-115	1,585	LAC 33:III.501.B.5.A.3	Total VOC	0.58
PT-116	Storage Tank PT-116	634	LAC 33:III.501.B.5.A.3	Total VOC	0.58
PT-126	Storage Tank PT-126	1,584	LAC 33:III.501.B.5.A.3	Total VOC	<0.001
PT-127	Storage Tank PT-127	2,640	LAC 33:III.501.B.5.D	Ammonia	0.21
PT-128	Storage Tank PT-128	2,640	LAC 33:III.501.B.5.A.3	Total VOC	<0.001
PT-129	Storage Tank PT-129	792	LAC 33:III.501.B.5.A.3	Total VOC	<0.001
PT-132	Storage Tank PT-132	5,283	LAC 33:III.501.B.5.A.3	Total VOC Propylene Glycol	<0.001 <0.001
PT-302	Storage Tank PT-302	7,925	LAC 33:III.501.B.5.A.3	Total VOC	<0.001
PV-306	Storage Tank PV-306	528	LAC 33:III.501.B.5.A.3	Total VOC	0.002
PV-309	Storage Tank PV-309	1,689	LAC 33:III.501.B.5.A.3	Total VOC	0.001
PT-401	Storage Tank PT-401	1,450	LAC 33:III.501.B.5.A.3	Ammonia	0.08
N/A	Diesel Storage Tank	300	LAC 33:III.501.B.5.A.3	Total VOC	0.01
N/A	Waste Oil Storage Tank	300	LAC 33:III.501.B.5.A.3	Total VOC	<0.001
PT-618	Chlorine-Contact Tank	1,140	LAC 33:III.501.B.5.D	Chlorine	0.05

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IV. PERMIT SHIELDS

A permit shield was not requested.

V. PERIODIC MONITORING

The Title V permit requires FPC-LA to monitor Vinyl Chloride (VCM) emissions from all Reactor Openings. To meet the 10 ppm VCM limit on exhaust from the stripper and all equipment exhaust preceding the stripper, FPC-LA utilizes a VCM Recovery System which vents the recovery system exhaust to incinerators in the VCM plant. The incinerator exhaust is monitored by a CEMS (continuous emission monitoring system) to verify that the 10 ppm limit is met. For sources following the strippers, VCM emissions are due to unreacted VCM not completely steam stripped from the polymer product (PVC). Therefore, for all sources downstream of the strippers, VCM emissions are essentially determined by the efficiency of the strippers. The VCM content in each grade of PVC resin is determined at 8-hour intervals in accordance with methods of NESHAP Subpart F to ensure that the NESHAP maximum residual VCM standard of 400 ppm (daily average) is met, and that the State MACT standard of 175 ppm (daily average) and 35 ppm (quarterly average) is also met. For Fugitives monitoring, the Louisiana MACT Determination for Non-HON Equipment leaks (March 30, 1995) will be used as the overall most stringent requirements. In addition to the LDAR monitoring program, NESHAP Subpart F requires an area vinyl chloride CMS (continuous monitoring system) to analyze air samples taken from strategic points in the plant to alert the plant of major vinyl chloride leaks.

Specific Requirements include maintaining and operating the dust filters associated with the loading and storage silos so that 99.99% removal efficiencies are achieved. In addition, daily inspection of the filter vents and the semiannual inspection of the filter bags have been retained.

Specific Requirements include maintaining and operating the high efficiency multicyclones and wet scrubbers associated with the dryers such that 99.99% removal efficiencies are achieved. Because particulate removal from the dryer vents is controlled by the multicyclones and wet scrubbers, requirements for continuous monitoring of the water flow rate to the wet scrubbers has also been included. In addition, a daily visual inspection of the multicyclone vents and semiannual maintenance inspection of the multicyclones has also been included in the Facility Specific Requirements.

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A requirement to monitor and record the calculated average residual VCM in all grades of resin processed through the PVC Stripper on a daily and also on a quarterly basis has been included. In addition, limitations on the maximum daily VCM residual and quarterly average VCM residual are also included.

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VI. APPLICABILITY AND EXEMPTIONS OF SELECTED SUBJECT ITEMS		
ID No:	Requirement	Notes
UNF3 PVC Unit	National Emission Standard for Benzene Waste Operations [40 CFR 61 Subpart FF]	EXEMPT FROM CONTROL. Facility handles less than 10 Mg/yr of benzene waste. Recordkeeping and reporting requirements apply.
	National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry [40 CFR 63 Subpart F]	DOES NOT APPLY. Polyvinyl Chloride is not a listed chemical on Table 1 in this Subpart.
	Compliance Assurance Monitoring (CAM) [40 CFR 64]	DOES NOT APPLY. PSEU is subject to a NESHAP regulation published after November 15, 1990 or the PSEUs in the PVC Unit has a particulate filter device which is a recovery device that meets the definition of "inherent process equipment" [40 CFR 64.1 and 64.2(b)]
	Control of Emission of Organic Compounds, Subchapter M. Limiting Volatile Organic Compound Emissions From Industrial Wastewater [LAC 33:III.2153]	DOES NOT APPLY. VOC concentration <1000 ppm in wastewater stream.
	Control of Emissions of Organic Compounds-Marine Vapor Recovery [LAC 33:III.2108]	DOES NOT APPLY. Facility does not have any marine loading capability.

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FUG1 PVC Plant Fugitive Emissions 177	National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry [40 CFR 63 Subpart F]		DOES NOT APPLY. Polyvinyl Chloride is not a listed chemical in Table 1 of Subpart F and therefore this Subpart is not applicable.
	National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks [40 CFR 63 Subpart H]		DOES NOT APPLY. Polyvinyl Chloride is not a listed chemical in Table 1 of Subpart F and therefore this Subpart is not applicable.
	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry [40 CFR 60 Subpart VV]		DOES NOT APPLY. Polyvinyl Chloride is not a listed chemical in 40 CFR 60.489.
EQT17 PVC Reactor Opening Emissions 179	Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes [40 CFR 60 Subpart RRR]		DOES NOT APPLY. Reactor does not produce as product, co-product, by-product, or intermediate any of the chemicals listed in 40 CFR 60.707.
	Control of Emissions of Organic Compounds- Waste Gas Disposal [LAC 33:III.2115]		DOES NOT APPLY. This regulation does not apply to any waste gas stream that is required by another federal or state regulation to implement controls that reduce VOCs to a more stringent standard than would be required by this section.

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VI. APPLICABILITY AND EXEMPTIONS OF SELECTED SUBJECT ITEMS		
ID No:	Requirement	Notes
EQT17 PVC Reactor Opening Emissions 179 (continued)	Control of Emissions of Organic Compounds- Limiting VOC Emissions from SOCM Reactor Processes and Distillation Operations [LAC 33:III.2147]	DOES NOT APPLY. Reactor does not produce as product, co-product, by-product, or intermediate any of the chemicals listed in Table 8.
EQT40 Cooling Tower 224	National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers [40 CFR 63 Subpart Q]	DOES NOT APPLY. No chromium based water treatment chemicals are used in the cooling tower.
EQT11-16, 38, 139 PVC Dryers 178A-F, 213, 256 EQT37 Waste PVC Dryer 206	Control of Emissions of Organic Compounds- Waste Gas Disposal [LAC 33:III.2115]	DOES NOT APPLY. This regulation does not apply to any waste gas stream that is required by another federal or state regulation to implement controls that reduce VOCs to a more stringent standard than would be required by this section.

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VI. APPLICABILITY AND EXEMPTIONS OF SELECTED SUBJECT ITEMS		
ID No:	Requirement	Notes
EQT57 PT-103 Tank	NSPS Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced after June 11, 1973, and Prior to May 19, 1978 [40 CFR 60.110]	DOES NOT APPLY. Does not meet the definition of a petroleum liquid. [40 CFR 60.111]
	NSPS Subpart Ka – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced after May 18, 1978, and Prior to July 23, 1984 [40 CFR 60.110a]	DOES NOT APPLY. Does not meet the definition of a petroleum liquid. [40 CFR 60.111a]
	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984. [40 CFR 60.110b]	DOES NOT APPLY. Storage vessel has a capacity <19,812 gallons (75 cubic meters).
	Control of Emission of Organic Compounds – Storage of VOC Compounds [LAC 33:III.2103]	DOES NOT APPLY. The maximum true vapor pressure is less than 1.5 psia. [LAC 33:III.2103.B]

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VI. APPLICABILITY AND EXEMPTIONS OF SELECTED SUBJECT ITEMS		
ID No:	Requirement	Notes
EQT44-54 Slurry Tanks PT- 501 A-G, PT-514, XDW Tanks PT-508 and PT-510	NSPS Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced after June 11, 1973, and Prior to May 19, 1978 [40 CFR 60.110]	DOES NOT APPLY. Does not meet the definition of a petroleum liquid. [40 CFR 60.111]
	NSPS Subpart Ka – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced after May 18, 1978, and Prior to July 23, 1984 [40 CFR 60.110a]	DOES NOT APPLY. Does not meet the definition of a petroleum liquid.. [40 CFR 60.111a]
	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984. [40 CFR 60.110b]	DOES NOT APPLY. The maximum true vapor pressure is less than 3.5 Kilopascals (kPa), i.e., 0.5 psia.
	Control of Emission of Organic Compounds – Storage of VOC Compounds [LAC 33:III.2103]	DOES NOT APPLY. The maximum true vapor pressure is less than 1.5 psia. [LAC 33:III.2103.B]

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VII. STREAMLINED REQUIREMENTS			
Unit or Plant Site	Programs Being Streamlined	Stream Applicability	Overall Most Stringent Program
PVC Unit	40 CFR 61 Subpart F (Vinyl Chloride)	10% Vinyl Chloride	LAC 33:III.5109 (LA Non-HON)
	40 CFR 61 Subpart V (Equipment Leaks)	10% VHAP	
	LAC 33:III.2122	10% VOC	
	LAC 33:III.5109 (LA Non-HON)	5% VOC TAP	

' Based on an analysis of monitoring and recordkeeping requirements, Louisiana non-HON MACT is determined to be the most stringent requirement.

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VIII. GLOSSARY

Baton Rouge Non-attainment Area – The entire parishes of Ascension, East Baton Rouge, Iberville, Livingston, and West Baton Rouge.

Cyclone – A control device that uses centrifugal force to separate particulate matter from the carrier gas stream.

Federally Enforceable Specific Condition - A federally enforceable specific condition written to limit the potential to Emit (PTE) of a source that is permanent, quantifiable, and practically enforceable. In order to meet these requirements, the draft permit containing the federally enforceable specific condition must be placed on public notice and include the following conditions:

- A clear statement of the operational limitation or condition which limits the source's potential to emit;
- Recordkeeping requirements related to the operational limitation or condition;
- A requirement that these records be made available for inspection by LDEQ personnel;
- A requirement to report for the previous calendar year.

Maximum Achievable Control Technology (MACT) - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

NESHAP - National Emission Standards for Hazardous Air Pollutants –Air emission standards for specific types of facilities, as outlined in 40 CFR Parts 61 through 63

Nitrogen Oxides (NO_x) - Compounds whose molecules consists of nitrogen and oxygen.

Nonattainment New Source Review (NNSR) - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

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NSPS - New Source Performance Standards – Air emission standards for specific types of facilities, as outlined in 40 CFR Part 60

Organic Compound - Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2)

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM₁₀- Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

TAP - Toxic Air Pollutant - LDEQ acronym for air pollutants regulated under LAC 33 Part III, Chapter 51, Tables 1 through 3.

Title V permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.